

FORM PTO-1449 **U.S. DEPARTMENT OF COMMERCE**
(REV. 7-80) **PATENT AND TRADEMARK OFFICE**

ATTY. DOCKET NO.
51889/5 US

APPLICATION NO.
10/664,666

INFORMATION DISCLOSURE CITATION

Title: **MIM Multilayer Capacitor**

APPLICANT – Douglas R. Hackler, Sr. et al.

FILING DATE-
September 18, 2003

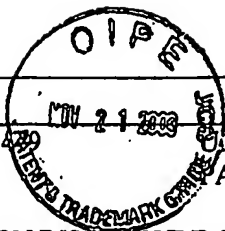
U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
✓	1	2003/0040161 A1	02/27/03	Schrenk et al.	438	393	09/03/02
	2	2002/0192919 A1	12/19/02	Bothra	438	381	04/26/01
	3	2002/0113292 A1	08/22/02	Appel	257	532	11/08/01
	4	2002/0047154 A1	04/25/02	Sowlati et al.	257	307	04/07/00
	5	6,524,926 B1	02/25/03	Allman et al.	438	387	11/27/00
	6	6,465,832 B1	10/15/02	Maeda et al.	257	307	04/05/00
	7	6,441,419 B1	08/27/02	Johnson et al.	257	296	03/15/00
	8	6,417,535 B1	07/09/02	Johnson et al.	257	306	12/23/98
	9	6,410,955 B1	06/25/02	Baker et al.	257	307	04/19/01
	10	6,251,740 B1	06/26/01	Johnson et al.	438	381	12/23/98
	11	5,912,485	06/15/99	Chao	257	308	10/24/96
	12	5,583,359	12/10/96	Ng et al.	257	306	03/03/95
	13	5,206,787	04/27/93	Fujioka	257	307	03/27/92
	14	5,160,987	11/03/92	Pricer et al.	257	307	02/15/91
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EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBLICA- TION DATE	COUNTRY / PATENT OFFICE	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	18	03091974 A	17.04.91	Japan				<input type="checkbox"/>
	19							
	20							
	21							
	22							
	23							
	24							
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OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication, etc.)

W	26	Kim et al., "Development of CVD-Ru/Ta ₂ O ₅ /CVD-Ru Capacitor with Concave Structure for Multigigabit-scale DRAM Generation," 2001 IEEE, pgs. 12.1.1-12.1.4.
W	27	Aoki et al., "Robust 130nm-Node Cu Dual Damascene Technology with Low-k Barrier SiCN," 2001 IEEE, pgs. 4.2.1-4.2.4.
W	28	Samavati et al., "Fractal Capacitors," IEEE Journal of Solid-State Circuits, Vol. 33, No. 12, December 1998, pgs. 2035-2041.
W	29	Kotecki et al., "(Ba, Sr) TiO dielectrics for future stacked-capacitor DRAM," IBM J. Res. Develop., Vol. 42, No. 3, May 1999, pg. 367-382.
W	30	Media for SolidState Technology, "Interfacial reaction and thermal stability of Ta ₂ O ₅ /TiN for metal electrode capacitors," http://solidstate.articles.printthis.clickability.com/pt/cpt?action=cpt&expire=&urlID=8160 , 11/4/2003, pgs. 1-7.
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